Effect of salinity and alleviating role of gibberellic acid (GA3) for enhancement of rice yield

ABSTRACT

Salinity affects rice crop from sowing to harvesting; subsequently the rice area and production is decreasing with passage of time. The effect of salinity on rice and salinity relieving role of GA3 (150 ppm) was observed on two salt tolerant rice cvs. (Pokkali and MR219) grown in various salt concentration (0, 50, 100, 150 and 200 mM) in glass house condition. A unit increase in salt concentration significantly decreased important yield components and consequently grain yield. Plants of MR219 grown in severe salinity stress (150 and 200 mM) could not initiate/form panicles and thus grains. However, Pokkali showed tolerance but, recorded low number of panicles and filled grains. Therefore, in the severe saline condition, GA3 could not play its salinity alleviating role, whereas, its impact was consistent in moderate salinity stress (50 and 100 mM).

Keyword: Hormone; GA3; Rice; Salinity